

# Claims

[c1] What is claimed is:

1. A flywheel assembly comprising:

a flywheel having a hub and an outer diameter and constructed to be attached to an engine;

a first ring attached to the flywheel about the outer diameter thereof; and

a second ring attached to the first ring and formed of a material different from that of the first ring.

[c2] 2. The flywheel assembly of claim 1 wherein the first ring is a ferrous material and the second ring is an elastomer material.

[c3] 3. The flywheel assembly of claim 2 wherein the second ring is integrally formed to the first ring.

[c4] 4. The flywheel assembly of claim 3 wherein the first and second rings are press fit to the flywheel.

[c5] 5. The flywheel assembly of claim 1 wherein the first ring is isolated from the flywheel by the second ring.

[c6] 6. The flywheel assembly of claim 1 wherein the second ring is designed to deform to dampen vibrations gener-

ated by torsional resonance of an engine during rotation of the flywheel assembly.

- [c7] 7. The flywheel assembly of claim 1 incorporated into an internal combustion engine.
- [c8] 8. The flywheel assembly of claim 7 wherein the flywheel assembly is constructed to generate a torsional resonance that counteracts a corresponding torsional resonance of the internal combustion engine.
- [c9] 9. The flywheel assembly of claim 7 wherein the internal combustion engine is incorporated into a watercraft.
- [c10] 10. A flywheel assembly comprising:
  - a ring having an inner surface;
  - a flywheel having an outer surface; and
  - an elastomer ring having a first side attached to the flywheel and a second side attached to the ring thereby separating the ring from the flywheel.
- [c11] 11. The flywheel assembly of claim 10 wherein the elastomer ring is bonded to the inner surface of the ring.
- [c12] 12. The flywheel assembly of claim 10 wherein the ring is constructed to press fit onto the flywheel with the elastomer ring positioned therebetween.
- [c13] 13. The flywheel assembly of claim 10 wherein the fly-

wheel further comprises a plurality of teeth about a perimeter thereof and constructed to engage a starter gear.

[c14] 14. The flywheel assembly of claim 10 wherein the elastomer ring dampens torsional resonance of the engine.

[c15] 15. The flywheel assembly of claim 10 wherein the ring is steel.

[c16] 16. The flywheel assembly of claim 10 incorporated into an outboard motor.

[c17] 17. A flywheel assembly comprising:  
a ring having an inner diameter;  
a flywheel having an outer diameter that passes through the ring; and  
a flexible membrane disposed between the ring and the flywheel and constructed to prevent contact therebetween.

[c18] 18. The flywheel assembly of claim 17 further comprising a ring gear attached to the flywheel and constructed to engage a starter gear of an engine.

[c19] 19. The flywheel assembly of claim 17 wherein the ring is press fit to the flywheel with the flexible membrane therebetween.

- [c20] 20. The flywheel assembly of claim 17 wherein the flexible membrane is an elastomer material having a resonance that dampens torsional resonance of an engine.
- [c21] 21. The flywheel assembly of claim 17 wherein the flexible material is attached to the ring.
- [c22] 22. The flywheel assembly of claim 17 attached to an engine incorporated into a watercraft.
- [c23] 23. The flywheel assembly of claim 17 attached to an engine incorporated into an outboard motor.
- [c24] 24. The flywheel assembly of claim 17 wherein the flywheel further comprises another diameter that is larger than the inner diameter of the ring.
- [c25] 25. A method of offsetting natural resonance in an internal combustion engine comprising the steps of:  
determining a natural resonance of an internal combustion engine;  
designing a flywheel component with a natural resonance to offset that of the internal combustion engine;  
and  
assembling the flywheel component to the internal combustion engine.
- [c26] 26. The method of claim 25 further comprising providing

a ferrous ring with an elastomer ring attached thereto as the flywheel component.

[c27]